


Programme: BEng (Hons) Civil Engineering Level – HE5 Module Title: Research Methods Module Code: CIE5007 Semester 2 (2017/18) Lecturer: Lekshmi Rajesh Email: L.Rajesh@bolton.ac.uk	
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ASSIGNMENT No 2 (of 2): Research Proposal - Report

Issue Date: 06/03/2018 Submission Date: 09/05/2018	Student ID:
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Aim

This coursework allows the students to demonstrate their understanding of the concepts of research methodology by producing a research proposal.

Learning Outcomes

- Use creativity to establish innovative solutions.
- Understand the use of technical literature and other information sources
- Investigate and define a problem and define constraints including environmental and sustainability limitations, health and safety and risk assessment issues

Assessment Weighting

This assignment contributes to 50% marks of the module.

Detailed Brief

Identify a topic of interest for yourself, focused towards the specialism indicated by the title of your degree programme. Within this area there should be a ‘problem’ and you should define the constraints including environmental and sustainability limitations, health and safety and risk assessment issues related to this.

Write a research proposal of about 2500 words. This proposal may (or may not) be developed subsequently into your dissertation. This proposal should be well referenced according to HARVARD format. **For secondary Research Level HE5 - It is expected that the Reference List will contain between ten and fifteen sources. As a MINIMUM the Reference List should include two refereed academic journals and four academic books.** Any appendices may be included at the end of the report; these will not be counted against the final word count.

Note that there will be **two interim submissions** apart from **the final submission** and each submission will be structured as indicated in Table 1 below.

All submissions are to be carried out via the Turn-it-in portal on the Moodle webpage of this module. **Please turn the page**

Table 1: Research Proposal Coursework Submission Details

Task	Approximate page guide	Submission date	Weightage
<p>Part 1- Interim Submission 1</p> <p>As an introduction, articulate the basis of the problem and set the Aim and TWO objectives.</p> <p>Cite at least one reference, and give the reference details at the end of your work.</p>	<p>500 word guide plus references+ RE1 Form</p>	<p>Week 7 13/03/2018</p>	<p>5%</p>
<p>Part 2- Interim Submission 2</p> <p>A. Based upon feedback and changes in your own thinking, rework and represent part 1. Review your objectives, and re-state it (whether it is changed or not).</p> <p>B. In addition to your aim & objectives, include a research question and a hypothesis if applicable. Conduct and write-up a review of the theory and the literature. Include references and a bibliography using 'Harvard Format'.</p> <p>Submit parts 1, 2A and 2B as one document</p>	<p>500 word guide plus references.</p> <p>1000 word guide plus references and appendices.</p>	<p>Week 10 09/04/2018</p>	<p>5%</p>
<p>Part 3- Final Submission</p> <p>A. Based upon feedback and changes in your own thinking, rework and represent parts 1, 2A and B.</p> <p>B. Define the variables or key terms in your Aim.</p> <p>Design and describe an appropriate method that meets your objectives. This will usually involve obtaining some primary or secondary data. Cite authoritative sources to justify your choice of method.</p> <p>Where appropriate include the following:</p> <p>Description of your population, description on how you will select your sample, how you will administer your data collection tool, how you will execute your analysis and what steps will be taken to assure reliability and validity.</p> <p>Include the following in Appendix:</p> <p>A copy of your data collection tool if any.</p> <p>If proposing the use of secondary data, you may include a sample.</p> <p>Include references and a bibliography using 'Harvard Format'.</p> <p>Include Table of contents, lists of abbreviations, glossary of terms, symbols, appendices, figures and tables where applicable.</p> <p>Front your document with an abstract.</p> <p>Submit only the final complete research proposal.</p>	<p>Total document 2500 word guide plus references and appendices.</p>	<p>09/05/2018</p>	<p>90%</p>

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Note

Where applicable,

- Complete the 'post-graduate and undergraduate laboratory, practical and site based projects' form (pp.4-5 of this document).
- Also complete the 'research ethics checklist' (pp.6-11 of this document).
- Also if necessary complete the 'participant information sheet' (p.12 of this document).

Marking Criteria

Interim Submissions	5 marks each
Introduction / problem articulation	20 marks
Literature review; citation of authoritative sources, identification of appropriate theories, critical appraisal, correct use of citing methods in flow of text	25 marks
Method description, evidence of reading a range of research methods texts to justify chosen method and understanding of research methodological principles	25 marks
Presentation and communication style in the report	10 marks
Correct Harvard style referencing/bibliography/Use of Academic Resources	10 marks

Please turn the page for appropriate templates

LABORATORY WORK AND ETHICAL COMPLIANCE

RAK ACADEMIC CENTRE

Post-graduate and under-graduate Laboratory, Practical or Site-based Projects

This form is to be completed by the student and signed by the student and the academic supervisor before the commencement of laboratory work. (*Copies to be kept by the student, supervisor and relevant Technician*).

Project Title: _____

Name of student: _____

Course _____ Year _____

Name of academic supervisor: _____

The potential hazards of this project have been discussed in full by the supervisor, student and relevant technical staff. The student understands these hazards and agrees to abide by the safety procedures set out and referenced in the Faculty Health & Safety Statement and the instructions of the supervisor or person guiding his/her benchwork. Guidelines for the supervision of post-graduate laboratory-based project work are shown overleaf.

The potential hazards are: (*please tick as appropriate*)

Machinery
Hazardous Materials / Chemicals
None of the above

If any of the above potential hazards exist then these must be detailed and appropriate control and monitoring procedures defined to minimise such risks. The risk assessment section **MUST** be completed by the student following discussion with the project supervisor.

Risk Assessment

Continue risk assessment overleaf if needed.

Signature of Student _____
Date _____

Signature of Supervisor _____
Date _____

Please turn the page

Guidelines for the Supervision of undergraduate Laboratory-based project work

Post-graduates who do not have a minimum of one year's appropriate laboratory experience must follow under-graduate guidelines

The purpose of these guidelines are to provide a system whereby the student works in as safe an environment as possible, in order both to reduce the risk of an accident and to respond as rapidly as possible to an accident, should it arise. However, it should be stressed that no system is foolproof and that the student must assure himself/herself of the likely risks involved and gain the necessary proficiency to minimise the likelihood of an accident. **There is no substitute for care and attention.**

If the academic supervisor is not in the laboratory, undergraduates may then work under the guidance and in the continuous presence of a **named** postgraduate student, postdoctoral worker or technician who has had a minimum of one year's appropriate laboratory experience.

The supervisor must be fully aware of the procedures being carried out by the undergraduate and should be present in the Institute and contactable during the undergraduate practical. If the academic supervisor is not contactable during the undergraduate practical they must arrange for another academic member of staff to take over the supervision of the student and notify everyone concerned.

Should the named person guiding the undergraduate be absent, another appropriately experienced person may substitute provided that he or she is familiar with the procedures being carried out by the undergraduate and is present in the laboratory while the undergraduate is working.

Undergraduates should not normally work in laboratories outside the booked times. Where this is unavoidable, specific arrangements must be made with an appropriately experienced person to be present in the laboratory with the undergraduate. If the work is to be performed before 9 am or after 5 p.m. an academic supervisor must be present with the undergraduate.

This document should be retained by the Supervisor.

Copies of this document must be retained by the student and the senior technician or support member of staff responsible for the immediate working area.

Please turn the page

RESEARCH ETHICS CHECKLIST Form RE1

This checklist should be completed for every research project which involves human participants. It is used to identify whether a full application for ethics approval needs to be submitted.

Before completing this form, please refer to the University Code of Practice on Ethical Standards for Research Involving Human Participants. The principal investigator and, where the principal investigator is a student, the supervisor, is responsible for exercising appropriate professional judgment in this review.

This checklist must be completed before potential participants are approached to take part in any research.

Section I: Applicant Details

1.	Name of Researcher (applicant):	
2.	Status	
3.	Email Address:	
4a.	Contact Address:	
4b.	Telephone Number:	

Section II: Project Details

5.	Project Title:	
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Section III: For Students Only:

6.	Course title and module name and number where appropriate School/Centre:	
7.	Supervisor's or module leader's name:	
8.	Email address:	
9.	Telephone extension::	

Please turn the page

Section IV: Research Checklist

Please answer each question by ticking the appropriate box:

	YES	NO
1. Will the study involve participants who are particularly vulnerable or who may be unable to give informed consent (e.g. children, people with learning disabilities, emotional difficulties, problems with understanding and/or communication, your own students)?		
2. Will the study require the co-operation of a gatekeeper for initial access to the groups or individuals to be recruited (e.g. students at school, members of self-help group, residents of nursing home)?		
3. Will deception be necessary, i.e. will participants take part without knowing the true purpose of the study or without their knowledge/consent at the time (e.g. covert observation of people in non-public places)?		
4. Will the study involve discussion of topics which the participants may find sensitive (e.g. sexual activity, own drug use)?		
5. Will drugs, placebos or other substances (e.g. food substances, alcohol, nicotine, vitamins) be administered to or ingested by participants or will the study involve invasive, intrusive or potentially harmful procedures of any kind?		
6. Will blood or tissues samples be obtained from participants?		
7. Will pain or more than mild discomfort be likely to result from the study?		
8. Could the study induce psychological stress or anxiety or cause harm or negative consequences beyond the risks encountered in normal life?		
9. Will the study involve prolonged or repetitive testing?		
10. Will financial inducements (other than reasonable expenses and compensation for time) be offered to participants?		
11. Will participants' right to withdraw from the study at any time be withheld or not made explicit?		

Please turn the page

12. Will participants' anonymity be compromised or their right to anonymity be withheld or information they give be identifiable as theirs?		
13. Might permission for the study need to be sought from the researcher's or from participants' employer?		
14. Will the study involve recruitment of patients or staff through the NHS?		

If ALL items in the Declaration are ticked AND if you have answered NO to ALL questions in Section IV, send the completed and signed Form RE1 to your School/Centre Research Ethics Officer for information. You may proceed with the research but should follow any subsequent guidance or requests from the School/Centre Research Ethics Officer or your supervisor/module leader where appropriate. Undergraduate and taught postgraduate students should retain a copy of this form and submit it with their research report or dissertation (bound in at the beginning). **Work which is submitted without the appropriate ethics form will be returned unassessed.**

If ANY of the items in the Declaration are not ticked AND / OR if you have answered YES to ANY of the questions in Section IV, you will need to describe more fully in Section V of the form below how you plan to deal with the ethical issues raised by your research. This does not mean that you cannot do the research, only that your proposal will need to be approved by the School/Centre Research Ethics Officer or School/Centre Research Ethics Committee or Sub-committee. When submitting the form as described in the above paragraph you should substitute the original Section V with the version authorized by the School/Centre Research Ethics officer.

If you answered YES to **question 14**, you will also have to submit an application to the appropriate external health authority ethics committee, after you have received approval from the School/Centre Research Ethics Officer/Committee and, where appropriate, the University Research Ethics Committee.

Please turn the page

Section V: Addressing Ethical Problems

If you have answered YES to any of questions 1-12 please complete below and submit the form to your School/Centre Research Ethics Officer.

Project Title

Principal Investigator/Researcher/Student

Supervisor

Summary of issues and action to be taken to address the ethics problem(s)

Please note that it is your responsibility to follow the University's Code of Practice on Ethical Standards and any relevant academic or professional guidelines in the conduct of your study. **This includes providing appropriate information sheets and consent forms, and ensuring confidentiality in the storage and use of data.** Any significant change to the design or conduct of the research should be notified to the School/Centre Research Ethics Officer and may require a new application for ethics approval.

Signed: _____ Principal Investigator/Researcher

Approved: _____ Supervisor or module leader (where appropriate)

Date: _____

Please turn the page

For use by School/Centre Research Ethics Officer:

- No ethical problems are raised by this proposed study on record -
- Appropriate action taken to maintain ethical standards
- The research protocol should be revised to eliminate the ethical concerns or reduce them to an acceptable level, using the attached suggestions
- Please submit School/Centre Application for Ethics Approval (Form RE2(D))
- Please submit University Application for Ethics Approval (Form RE2(U))

Retain this form

Retain this form on record and return a copy of section V to Researcher

Signed: _____

Date: _____

Please turn the page

Example 1: Participant Information Sheet

Perceptions of owners of timber frame housing about the quality of their homes

My name is _____. I am writing a research dissertation as part of my BSc (Hons) degree at the University of Bolton. I am working on a project looking at perceptions of owners of timber frame housing about the quality of their homes. I am talking to home owners on several estates in the area as part of my work.

What will I have to do if I take part?

If you agree to take part, I will ask you to answer some questions. There aren't any right or wrong answers – we just want to hear about your opinions. The discussion should take about half an hour at the longest. Please note that some of the questions may relate to your personal experiences.

Do I have to take part?

No, **taking part is voluntary**. If you don't want to take part, you do not have to give a reason and no pressure will be out on you to try and change your mind. You can pull out of the discussion at any time.

If I agree to take part what happens to what I say?

All the information you give us **will be confidential** and used for the purposes of this study only. The data will be collected and stored in accordance with the Data Protection Act 1998 and will be disposed of in a secure manner. The information will be used in a way that will not allow you to be identified individually. **However, we must inform the University if, in the unlikely event, something you have said leads me to believe, that either your health and safety, or the health and safety of others around you, is at immediate risk.**

If you feel I have not acted appropriately after the discussion, and need help dealing with your feelings, it is very important that you talk to someone right away.

The contact details for the person to talk to are:

Name:

Tele:

E-mail:

THANK YOU VERY MUCH FOR YOUR HELP!

*ADAPTED FOR THE BUILT ENVIRONMENT FROM A DOCUMENT APPROVED BY THE UNIVERSITY OF
BOLTON RESEARCH ETHICS COMMITTEE*

Please turn the page

Declaration by Researcher (Please tick the appropriate boxes)

	I have read the University's Code of Practice
	The topic merits further research
	I have the skills to carry out the research
	The participant information sheet, if needed, is appropriate
	The procedures for recruitment and obtaining informed consent, if needed, are appropriate
	The research is exempt from further ethics review according to current University guidelines
Comments from Researcher, and/or from Supervisor if Researcher is Undergraduate or Taught Postgraduate student:	